

NESTLE AND BREAST VS. BOTTLE FEEDING: MAINSTREAM AND MARXIST PERSPECTIVES

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The breast vs. bottle feeding issue has sparked a controversial debate. Mainstream analysis of the problem shows that arguments made by the business community, as represented by the Nestle Corporation, do not withstand examination of the evidence. For example, it cannot be substantiated that women begin formula feeding because they have entered the labor force. Mainstream studies of cost effectiveness further indicate that bottle feeding is a drain on the incomes of impoverished Third World families and nations. Marxist analysis gives a very different perspective. Nestle represents 19th century capitalist development and the Industrial Revolution, and 20th century imperialism, neocolonialism and monopoly capitalism. Its motive has been capital accumulation and expansion. To increase surplus value appropriation, capitalism must devalue the household (subsistence) economy in which women enjoyed considerable status. Women also produce the most fundamental commodity for capitalism—laborers; therefore, the biological connection must be masked and controlled for the benefit of capital. Thus, as the capitalist mode of production has developed, women have been removed from important roles in production and reproduction. Coupled with the ascendancy of science, expertism and public health imperialism, breast feeding in any market economy becomes nearly impossible. As women internalize the values of capitalist ideology, they elevate “man-made” marketed commodities over subsistence goods such as breast milk.

This paper provides a twofold analysis of the breast vs. bottle feeding issue and Nestle's role, approaching the controversy, on the one hand, from a mainstream and, on the other, from a Marxist perspective. The impetus is not only to provide insight into the problem, but also to contrast these two unreconcilably different methodologies.

What is the difference between a mainstream and a Marxist analysis? Briefly, the mainstream perspective accepts the fundamental socioeconomic system—capitalism—and focuses its problem solving on simple market relations, analyzing “factors of production” (land, labor and capital) and not the mode of production. What cannot be explained by the mathematical formulas of the day is often ignored, regardless of its importance. Poor economic performance is frequently considered the result of either the inability of local economists to correctly apply the mathematics, or “overpopulation,” the demographic catch-all for socioeconomic ills. History and politics are often labeled as “cultural” differences and thus out of anyone's control.

For the mainstream, value and hence prices are based on “utility.” This contrasts sharply with the labor theory of value first articulated by Ricardo as a means to strengthen the position of the capitalist class vis-à-vis the landlords. However, the

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theory was a double-edged sword and in the hands of Marx became a tool to be used by the working class against the capitalist class, the latter finding it necessary to abandon and refute the labor theory of value and adopting “utility” theory in its place (1, Chap. 19).

A Marxist analysis, on the other hand, is based on a historical and dialectical materialist perspective. Events are not isolated from their historical causes, as occurs in mainstream analyses. Historical materialism asserts that social consciousness is the outcome of social being (2). As Marx stated in *Capital* (3), “Technology discloses man’s mode of dealing with nature, the immediate process of production by which he sustains his life and thereby also lays bare the mode of formation of his social relations, and of the mental conceptions that flow from them.”¹

MAINSTREAM ANALYSIS

Nestle’s own arguments must be seen as one facet of the mainstream critique. Most of the points raised use or imply the “utility” concept and represent the business point of view supported by many mainstream economists. In April 1979, Nestle published a pamphlet (5) which includes eight points Nestle claims justify its activities. These points are presented (in italics) and critiqued below:

Infant mortality is decreasing most in urban areas where more Nestle formula is sold and this formula as a supplement has saved many children from malnutrition. Contrary to Nestle’s claims, the decrease in infant mortality among the world’s poor is due to an increase in the availability of medical services and other factors operating especially in urban areas; moreover, formula use is more often associated with malnutrition than with health. For example, in a study of mortality records from 13 Latin American communities (6), it was shown that nutritional deficiency was a principal cause of death in the first year of life and that death due to nutritional deficiency was much less frequent in infants who were breast fed and never weaned than in those who were breast fed not at all or for only limited periods. This refutes Nestle’s implication of a cause-effect relationship. Although the two phenomena—sale of infant formula and the lowering of the infant mortality rate—may coincide in time and place, it cannot be stated that formula is therefore the cause of the decline in infant mortality.

In addition, the statement that supplemental formula has saved many children from malnutrition is not substantiated. Breast milk supplements are not required until an infant is approximately four months old, at the youngest, by which time the maturity of the infant’s digestive system will permit her/him to handle many nonmilk vegetable foods such as certain cereals, legumes, fruits and vegetables (7). These are cheap, locally available foods which are given by cup and spoon. Formula as a supplement can be claimed to save an infant from malnutrition *only* if the child’s supplemental feedings *must* be a breast milk substitute.

Urban migration is sending more mothers into the work force and therefore a breast milk substitute is necessary. This statement implies that rural to urban migration of low-income families causes previously unemployed rural women to become employed in urban jobs and that these jobs are incompatible with child care and therefore breast

¹For a thorough examination of mainstream vs. Marxist economics, see Hunt and Sherman (4).

feeding. A significant fallacy in this argument is that it implies that poor rural women do not participate in productive nonhousehold labor. On the contrary, in many developing countries throughout Asia, Africa and Latin America, rural women make a significant contribution in food production, trading, artesan work, livestock tending, and so on (8). In fact, rural-urban migration often results in a decrease in women's nonhousehold productive opportunities. Many women find their job possibilities limited to domestic service (9). In Latin America and Asia, rural to urban migrant women are increasingly being employed as manual laborers in the runaway shops of the electronics and garment industries. However, using Mexico as a prime example of this trend, it can be seen that the number of jobs available for women and men is far from sufficient for the thousands of displaced rural families that pour monthly into Ciudad Juarez, Nogales, Tijuana and Mexicali. Therefore, many of these migrant women must take jobs in domestic service, often on the U.S. side of the border (10). Unemployment among women is very high, with overall adult unemployment in the less developed countries frequently at 40–50 percent.

Focusing on census analyses of Mexico, it can be shown that the vast majority of women do *not* participate in the labor force and that many who do are in occupations that are quite compatible with child care. According to 1970 census data, only 19 percent of the 13 million Mexican workers are women. Of these 2.5 million working women, less than 600,000 of the female nonagricultural wage workers are “really workers”: less than 400,000 work in administrative offices and the rest as domestics and manual workers. A scant 2 percent of the total are in higher professional categories, the only income bracket in which bottle feeding would appear practicable in terms of both hygiene and purchasing power. Approximately half of all working women earned less than \$40.00 U.S. dollar equivalents per month (11). The cost of formula feeding would have consumed a sizable proportion of the income of this group of women were they mothers of infants (12).

Another relevant point raised by Reutlinger and Selowsky (13) is that the marginal propensity to spend on an infant increases only slightly with an increase in family income due to a previously lactating mother's entrance into the labor force. In a study undertaken in Calcutta's poor neighborhoods, it was found that a marginal propensity to spend on an infant of .53 was necessary to insure the availability of adequate breast milk substitutes for the infant. The observed propensity for this group was only .06. The authors conclude (13, pp. 35–38) that “even under optimistic assumptions, a decline in breast feeding as a result of the mother's participation in the labor force could have an important negative effect on the nutritional status of the child.”

A final note on this point is that women who wean their babies from the breast rarely cite work as the reason. A review of the literature (14) has shown that only 6 percent of the women surveyed in various countries cite “work” as their reason for weaning.

Some governments of state-controlled economies have invited Nestle to do infant food promotions, thereby proving that promotion serves a useful educational purpose. The ambiguity of this statement makes it difficult to understand. The implication is that the states referred to are socialist. If that is the case, it is certain that Nestle would be under strict guidelines and limitations. Furthermore, the statement implies that governments of state-controlled economies are wiser and more ethical, making formula

promotion in this milieu a proof of its educational worth. However, Nestle's public insistence that the regulation of formula promotion violates principles of free enterprise and that such regulation is socialist-inspired makes the use of this rationale paradoxical and contradictory to corporate policy and activities.

The main purpose of Nestle-employed health personnel is to explain the proper use of its products to doctors and nurses in hospitals. This statement is grossly distorted as there are documented cases of Nestle personnel dressed in nurse's apparel visiting villages to promote formula directly to pregnant women and mothers of young infants. A photographic example of this type of promotion is shown in Nestle's own centennial yearbook (15). Nestle's so-called educational efforts aimed at hospital medical professionals are the result of Nestle's decision to use the health profession as a marketing tool. According to the publication *Business Abroad* (16):

In less developed countries, the best form of promoting baby food formulas may well be the clinics which the company sponsors, at which nurses and doctors in its employ offer child care guidance service. One fruitful byproduct of this operation is that at christenings and birthday parties, Nestle products often are given as presents.

The distribution of free samples is normal and correct in physican-related sectors, especially in those (e.g. missions, orphanages, clinics) that have limited resources. For Nestle, free samples amount to only 0.5 percent of sales. This implies that free sample distribution is a form of philanthropy undertaken to benefit health-related facilities that have limited resources and cater to the poor. However, since Nestle admits that only 1/200th of total formula sales are given as free samples, the importance of this distribution mode is miniscule and in fact strengthens the notion that free samples are indeed a very effective means of increasing sales. In addition, free samples are given indiscriminately in most cases to mothers of young infants and to women in maternity wards, thereby making the reference to orphanages and missions pure propaganda. According to the publication *American Druggist* (17), "Baby formula is a high volume item that is practically presold to new mothers via physician/hospital endorsement."

Nestle engages in a variety of efforts to assure that mothers understand the proper and safe way to formula feed their babies, e.g. sterile bottles, boiled water, etc. The assumption that poor illiterate Third World mothers are incapable of correct formula preparation and delivery is a form of racism. The use of the term "racism" in this statement is to imply that Nestle is profoundly antiracist. However, Nestle has extensive investments in South Africa (18), a country that has received almost universal condemnation for its policy of apartheid. In addition, even if Nestle does on occasion make these educational efforts, the knowledge obtained by families does not miraculously provide them with the income and sanitary facilities needed to follow directions for formula preparation. Furthermore, Nestle's critics realize that the correct preparation and dilution of formula are economically out of reach of many poor families that lack potable water, adequate cooking facilities for boiling water and sufficient income to purchase the proper amount of formula without using up too great a portion of the family food budget. Critics do not focus on the intellectual capabilities of Third World mothers but rather on the economic realities of their existence. Interestingly, Nestle has never come out against the injustices suffered by any of the world's poor, most of whom are nonwhite. This may indeed be seen as "racist." Also, Nestle's shareholding policy guarantees that control of the corporation will always be (discriminatorily) Swiss (19).

Most formula is sold to middle and upper class mothers or to urban families in which the mother works. First of all, Nestle provides no data to prove this statement, which is in fact doubtful. Second, as was stated in the critique of an earlier point, many poor, urban, nonworking women use formula. Lastly, Nestle's formula is promoted and sold very widely in small rural village shops in Asia, Africa and Latin America.

A boycott of Nestle products in the United States will not help any Third World infants, but would harm instead the financial security of the 20,000 families associated with the Nestle Corporation in the U.S. This is the most important and the only relevant point that Nestle makes. While the first seven statements centered around moral and ethical issues as well as Nestle's insistence that it is providing a necessary service, point eight reveals Nestle's greatest preoccupation: the effects of a boycott on its sales. Although only 7 percent of Nestle's work force is in the United States, 20 percent of its turnover is in that country (18). The February 1984 termination of the consumer-activist-led boycott of Nestle products occurred when Nestle at long last agreed to follow the WHO/UNICEF formula marketing code. This indicates the economic impact of the boycott on the corporation and demonstrates the power of consumer-activist groups to influence corporate policy.

The Economics of Breast Feeding

Another mainstream critique of formula use is encountered in the household level cost-benefit analysis of breast versus bottle feeding. In this type of analysis, the costs of formula, preparation time, sterilization procedures, bottles, and so on are compared to the costs necessary to provide the mother herself with the extra food necessary to insure an adequate breast milk output.

Such a study was undertaken in Ghana and the Ivory Coast where it was found that breast feeding an infant for two years could conceivably save a family U.S. \$642 with additional savings due to the health effects of breast feeding which would lessen the chance of infant diarrhea and other diseases requiring costly medical care (12). It must be recalled that the per capita income in many Third World countries is near or below \$600 per annum (4, p. 537), making a biannual savings of \$642 very significant indeed.

The economic value of breast feeding may also be examined at the national level where the value of breast milk as a commodity becomes staggering. For example, Berg (20) has shown that in Chile in 1959, potential breast milk production was 57,700 tons, of which 95 percent was utilized. By 1970, a potential production of 93,200 tons was only used to the tune of 16 percent. The milk of 32,000 cows would be necessary to cover that loss. In Kenya, the estimated annual loss of breast milk as a resource is 11.5 million dollars (equivalent to two thirds the annual health budget for the entire country!). In addition, infant formula is often imported, thus draining further a poor nation's foreign exchange reserves.

Eighty-seven percent of all babies are born in the Third World, with approximately 25 percent of these in urban areas where the trend to bottle feed is greatest due partly to increased participation of women in the work force and partly to the adoption of "modern ways." The lack of breast feeding may cost these nations as much as \$780 million dollars annually (20).

MARXIST ANALYSIS

The discussion of whether or not breast milk is the ideal infant food is like asking whether or not the kidneys are the ideal means to eliminate wastes from the body and suggests that dialysis machines ought to replace human kidneys. Human breast milk is controversial because it is a highly valued product produced by the family for family consumption and, at least up to now, has been totally removed from capitalist market control. Subsistence production is contradictory to the needs of capital which, to be effective, must incorporate into the market as many goods necessary for or “desired” by humans. Without commodity production and distribution via the market, there is no surplus value extraction, i.e. no profit.

The development of suitable infant formulas and delivery bottles occurred simultaneously with the Industrial Revolution. Initially, such preparations were forms of condensed milk, the production of which was a significant contribution because unrefrigerated milk would spoil rapidly and milk was often associated with certain diseases such as tuberculosis. Condensed milk in tins could be stored for relatively long periods of time (15).

Nestle and Imperialism

The Nestle Corporation was one of the first to produce condensed milk and Nestle's current policies appear to date back to the days of its founding in 1866 when the tiny household firm was owned and run by one man, Henri Nestle, a chemist and merchant by trade. Nestle devised a milk-based product which was found suitable for infant feeding. Advertising was initially concentrated on the medical profession, but later Nestle concluded that he should aim his publicity directly at mothers: “Mothers will do my publicity for me” (15). The Nestle Corporation thus was founded on the production of infant milk food (the precursor to formula) and, over 100 years later, in spite of expansion and diversification, continues to produce formula but now on a world scale. As recently as 1978, according to *Fortune* (21), Nestle was listed as 30th of the 50 largest corporations worldwide and the second largest industrial food producer after Unilever of Holland. In many nations, Nestle has virtual monopolies on the sale of several to many commodities.

Although much of Nestle's expansion has been in Third World countries, its greatest turnover has been in the industrialized nations where it obtains approximately 60 percent of its sales (18). Profitability, of course, often rests upon obtaining cheap, raw foodstuffs such as tea, coffee and cocoa from the underdeveloped nations. Thirty years ago it was reported that Nestle controlled the West German market in chocolate, condensed milk and concentrated soups (22). In 1971 Nestle controlled 75 percent of the condensed milk and 80 percent of the instant coffee sales in that country (23). After World War I Nestle began to invest heavily in the developing countries, a process that was greatly accelerated after World War II (15).

Figure 1 is based on information taken from Nestle's 1978 Annual Report (18). It indicates that milk powder, which would include baby milk, is sold in 24 developing countries and is produced in 16 of them. Of Nestle's 300 factories worldwide, 103 are in the developing countries and many of these 103 plants were locally owned food processing firms bought out by Nestle (18).

	No. factories	Swt. cond. milk	Evaporated milk	Past. milk & cream	Milk powder	Cheese and butter	Dietetic milk fds.	Infant cereals	Baby foods	Coffee extracts	Inst. chocolate	Liquid drinks	Choc. and candy	Soups, stews, etc.	Frozen foods	Ice cream	Yogurt, etc.	Pharmaceuticals
Central America	2	#	#		+		#	+	*		+		#	*				#
Argentina	8	*	*	*	*		*	*		*	*		*	*		*		*
Brazil	15	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Chile	6	*	*	*	*		*	*	*	*	*		#	*	*	*		#
Colombia	10	*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	*
Ecuador	2	+	#	*	*	*	+	#			+		*	*				#
Jamaica	2	*	*	+	#		#	#		#	*			+				#
Mexico	11	*	*	*	*	*	*	*		*	*			*	#	*	*	*
Panama	2	*	*				#	#		#	#	*	#	+				#
Peru	2	*	*	*	*		*	*		*	*	#	#	*				#
Puerto Rico	3	#				#	#			+	#	*	#	+				*
Dominican Republic	1	*	*		*		#	#			#	*		+				#
Surinam	1	#	#	#			#	#		#	#		#	+				#
Trinidad	1	*	#	+	#	#	#	#		+	+	*	#	#				#
Uruguay	1						#	#		*	*		*					#
Venezuela	7	*	#	+	+	*	#	*		*	*	*	+	+				#
India	2	*		*	*		*	*		*	*		*	*				#
Indonesia	1	*		#	+	*	+	*		#	*			#				#
Malaysia and Singapore	4	*	#	+	#	#	#	#		#	+	#	+	+	#			#
Philippines	2	*	*	+	+		+	+		*	*							#
Thailand	1	*		+	#		#	#		+	#	#	#	#	#			#
South Africa	10	*	*	*	*	*	*	*		+	*		*	*			*	*
Ivory Coast	1	#		#	#	#	#	#		*	#	#	#	+	#	#	#	#
Ghana	1	*					#	*		#	*		*	*				#
Kenya	1	#		*		+	*	*		#	*			+				#
Swaziland	1	#	#	#	#	#	#	#		#	#	*	#	+				#
Nigeria	1	#	#	#			#	#		#	#			+	#			#
Madagascar	1	*					#	#										#
Senegal	1	*	*		#	#	#	#		#	#	#		#	#	#		#
Rhodesia (Zimbabwe)	1	*		*	*		*	*		#	*							#
Tunisia	1	#	#	*		#	#	*								*		#
Total Factories	103																	

Legend: * local production; # imports; + local production and imports

Figure 1. Manufacture and sale of Nestle products in the developing nations.

The profitability of Nestle's overseas operations can be seen by comparing some 1978 minimum wage levels: 71¢/hour in Mexico and 50¢/hour in the Dominican Republic (24). Nestle has 11 factories in Mexico and one in the Dominican Republic. Local prices do not reflect these reduced production costs. A general law of capitalism is that capital will flow to wherever the highest profit rate may be obtained (25). Nestle's 103 plants in the developing countries are testimony to this law.

Nestle's net profit in 1978 was 231,623,517 Swiss francs. Income from subsidiaries and allied companies was 413,106,988 Swiss francs. In addition, 23,000,000 francs were paid to Switzerland as taxes (18). Since Nestle is mandated to have two thirds of its shareholders in Switzerland (19), the majority of the profits return to Switzerland in the form of dividends, etc., rather than stay in the country where they were produced. Nestle's managers can then take this capital extracted from one developing country and invest it in another that has favorable wage rate, tax break and labor law conditions. Such arrangements allow Nestle to recuperate investments in a matter of several years.

The birth and growth of Nestle must be seen in the overall context of capitalism's development since the corporation was born at the height of the Industrial Revolution. According to Mandel (25), the Industrial Revolution was made possible by the plunder of astronomical amounts of wealth from Asia, Africa and Latin America. After plunder came trade and colonial governments made laws to favor the purchase of their goods over locally produced items by taxing the latter out of the market, using force to implement these policies. The result was the stagnation of once bustling village and town commerce and industry in Africa, Asia and Latin America, converting these nations into producers of unfinished raw materials and importers of manufactured goods (25).

When in the mid-nineteenth century the rate of profit began to fall in the West, capital was exported to the colonies where a high rate of profit was guaranteed. Loans were made with the stipulation that they be used to buy goods from the lending country. Operations to develop raw materials export businesses were created: harbors, plantations, mines, etc., and only light, not heavy manufacturing (25). Investments were recuperated very fast. J.F. Rippey (26) showed that for 120 British companies with overseas investments, profits equal to double the original investment were obtained in just five of the best years. As Sweezy (27) has so aptly stated, "One can conclude that foreign investment, far from being an outlet for domestically generated surplus, is a most efficient device for transferring surplus generated abroad to the investing country."

Nestle is an example of this phase of capitalist expression having come into existence in 1866. Nestle's centennial yearbook (15) shows how the company went rapidly through the various stages of capital accumulation and finally into its current monopoly capital phase with neocolonial superprofits.

Only two nations, Switzerland and the United States, are overcapitalized—a result of capital shifts following a world war (25). Due to Swiss laws and neutrality, Switzerland has had a remarkably stable currency for many years and has been a haven for capital from around the world, a fact which has favored Nestle's growth and prosperity: "Its broad geographical and product diversification, its involvement with the population explosion in backward countries, where it makes cheap baby food, and, finally,

the fact that it keeps its cash in solid Swiss francs make Nestle shares good insurance against depression, inflation or revolution" (28).

Although Nestle may try to exonerate itself by claiming to employ thousands of people in the developing countries and to be engaged in industrial production, the fact is that such high-technology food processing is redundant, contributes nothing to economic development, and is wasteful of scarce energy and other resources in that it takes cheap, nutritious, raw foodstuffs and converts them into overcooked, overpackaged, oversugared and salted, overadditived, overpublicized and overpriced commodities, with infant formula and baby foods being good examples of such high-tech foods. The amount of money necessary to peddle these products is shown by the fact that in Latin America, for example, the advertising to sales ratios in the domestic branded food sector are substantially higher than in the developed countries, indicating the costly "hard-sell" necessary to market these superfluous commodities (29).

Unlike other food manufacturers, Nestle is almost totally dependent on foreign revenue. Data reported in 1976 (29) indicate that 95 percent of Nestle's 7.2 billion dollar income comes from sales abroad, a substantially larger percentage than any of Nestle's nearest competitors, most of which are not involved in formula marketing. Of the top ten processed food manufacturers, only one company, Borden, which is last on the list, markets formula and only 16 percent of its total revenue is foreign. Unilever, the largest corporation to produce processed foods (Nestle is number two), has a total revenue of 14.8 billion dollars with 71 percent coming from foreign sources and 53 percent from food processing. Assuming that the food and nonfood items are sold equally at home and abroad, Nestle's foreign revenue for food products would be 5.88 billion, as compared to 5.57 billion dollars for Unilever.

Large corporations such as Nestle often control the world market for raw foods and can dictate prices to producers. Since they are price-fixing monopolies, even when the price of a raw food decreases, the finished product may increase in price. For example, Nestle and General Foods control 40 percent of the world coffee market and therefore have great leverage in setting producer prices. In 1968 the price of coffee beans fell by 30 percent relative to 1964, but the price to consumers jumped by 13 percent in the United States (30, p. 218).

In the Third World, the food processing industry needs cheap labor both in urban and rural areas to keep raw material as well as finished product costs as low as possible. Cash cropping, rather than subsistence farming, is encouraged and enforced not only by the existence of multinational food monopolies, but also by cooperating oligarchies, a world market for foodstuffs, and international banking institutions that tie loans to cash crop production. The World Bank, for example, gives most of its loans for cash crop production to insure loan repayment: "Delinquencies have also been reduced when repayment has been coordinated with the marketing of crops that are centrally processed, for example, cotton, cocoa, tea and coffee" (31). Similarly, the International Monetary Fund (IMF) ties its loans to fiscal policies which favor cash cropping and a decline in the indices of public welfare: currency devaluation, cutbacks in government spending, wage but not price controls, interest rate increases, open door to foreign investments, "free trade" (30, pp. 435-436).

Not surprisingly, countries with military dictatorships or prolonged martial law, that is, countries best suited to implement the IMF's policies, have been favored to

receive these loans. Nestle has taken advantage of these militarily enforced IMF policies. For example, since 1964, when the Brazilian military toppled the populist, democratically elected government of Goulart (32), Nestle has expanded its operations in Brazil to the point of having 15 factories by 1978, more than it had in most Western European countries (18). In 1978 Nestle announced that it was establishing a joint venture with the South Korean government to produce formula and baby foods (33). South Korea is another country that has had martial law and a regime supported by brute military force, electoral fraud, and the suppression of civil and human rights (34).

Nestle's production and distribution of infant formula produce one of the most dramatic outcomes of monopoly capitalist practice by causing, directly or indirectly, a significant proportion of Third World infant mortality each year. However, as can be seen in the above arguments, Nestle, in expanding its food processing capital and gimmickry from one poor country to another has already shown its purpose: to amass capital and political power at the expense of the poor workers and peasants who have no choice but to serve it. Whether it be a Guatemalan farm worker earning \$1/day picking coffee beans, a black South African factory worker with a per capita income of \$360/year (30, pp. 221, 384), or an infant critically ill from formula-related diarrhea, malnutrition, or pneumonia due to inappropriate bottle feeding, the message is clear: people live to produce profits and capital goes where surplus value is highest. Nestle is a prime example of neocolonialism, the economic policies of which, while hidden in fiscal reports, macro-economic models and projections, are as bad as colonial slavery—perhaps even worse.

The particular beauty of infant formula production and distribution from the industry point of view is that, on the one hand, the consuming infant is mute and unable to articulate her/his needs, feelings, or preferences (both physiological and emotional). On the other hand, the child's mother responds hormonally, physiologically, and emotionally to the termination of the suckling stimulus, as well as to suggestions that she may not produce enough milk. The result is a rapid decrease in milk production and ejection, and within two weeks, milk production ceases or reaches a point of insufficiency (35). A dependency on breast milk substitutes, unlike other foodstuffs, is thus easy to manipulate. Industry, staffed by physicians and nutritionists, as well as marketing specialists, is well aware of and can utilize the psycho-biological factors which rapidly cause a dependence on breast milk substitutes.

For a company like Nestle, which in many countries virtually controls the infant formula market, there is only one competitor: the lactating mother. Unlike other competitors, this one's milk production can be easily terminated through psychological suggestion or a marketing gimmick such as a two week's supply of free formula which, if used as directed, will induce dependency on formula since in two week's time, breast milk production will have ceased due to lack of suckling stimulus. Although it cannot be said that Nestle intentionally kills babies, from a strictly marketing point of view, it is in the interests of capital accumulation that more and more infants consume formula even if such consumption results in the death of some of the consumers.

While the death of a consumer might seem to be against business interests, formula producers are aware that the infant population rapidly outgrows its need for breast milk substitutes and by approximately 6 months of age can readily consume an ever-

increasing variety of adult foods. The formula consuming period is thus finite and short. Whether it be cut off by infant death or by normal digestive system maturation, formula will rarely be consumed beyond 9-15 months of age.

The Historical Role of Women in Production and Reproduction

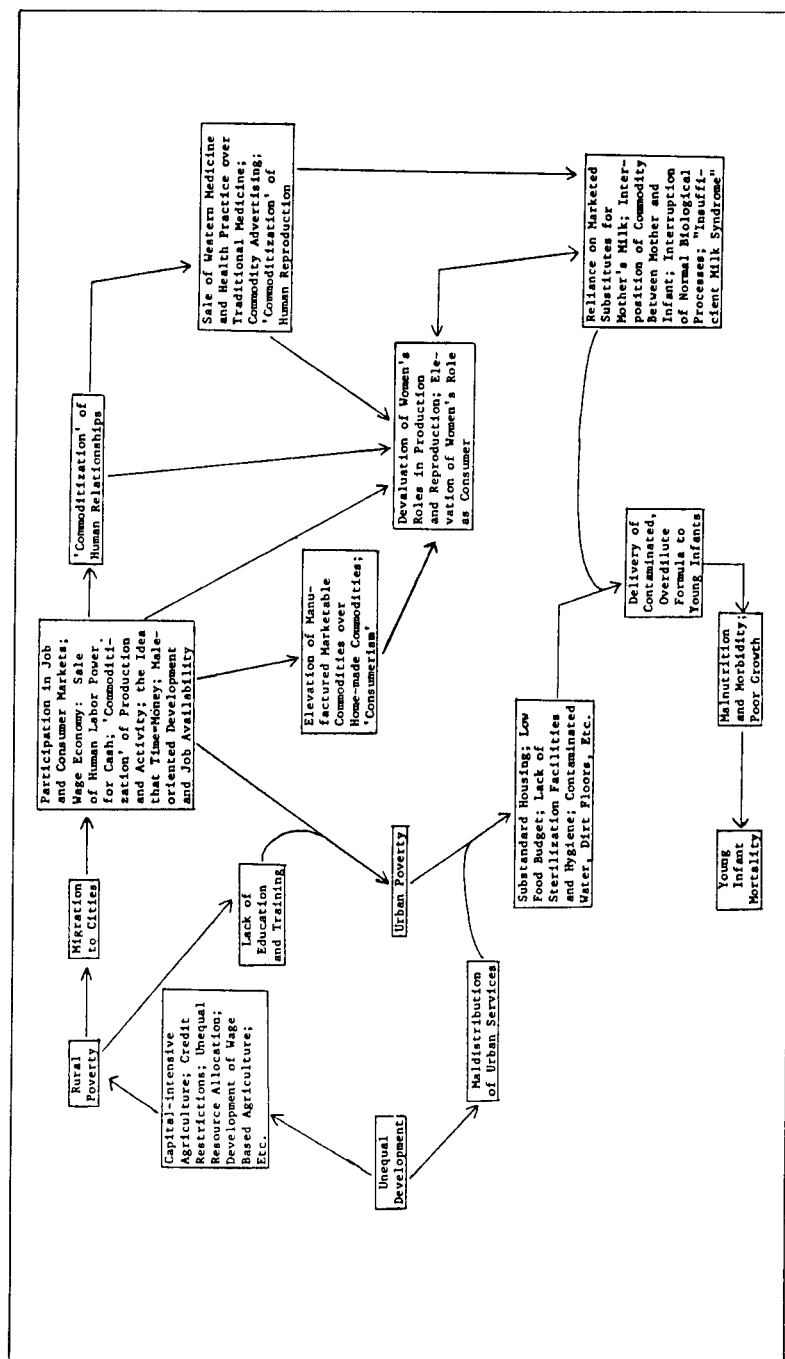
The growth of capitalism, with the Nestle Corporation as one example, has had as a result the segregation of men's and women's activities to a point heretofore unknown to human society. This factor has especially favored the decline of breast feeding and the use of breast milk substitutes. A human being does not give up a fundamental biological, social and psychological role such as lactation with such ease unless there has been a radical transformation in the mode of production and the social roles that grow out of it. To explain this phenomenon, a model has been proposed (36), shown in Figure 2. The convergence of so many parts of this model on the "devaluation of women's roles in production and reproduction and elevation of women's role as consumer" has great relevance to this discussion.

Under capitalism, "work is defined as that which occurs outside the household . . . only those who work (outside the home) may be accorded full status as normal and honorable adult members of society" (37). Women's work produces use value but no exchange value, and therefore, in typical GNP accounting, does not even appear in the tabulations since it does not enter the market. In fact, if the household economy becomes more active at the expense of the market, the GNP may actually fall although the actual standard of living could in fact improve (38). Developmentalists would call the economy a failure based on their biased mathematics.

Prior to modern capitalist development, women's work (spinning, ceramics, food preservation, etc.) was highly valued and necessary for survival (39). However, the Industrial Revolution and the capitalist mode of production in general, with its emphasis on the market, moved an ever-increasing number of womanly labors from the home to the factory, thus displacing and devaluing women socially and economically. Womanly labor, now performed by men, became more valuable: "The same manual activities that women had performed inside their houses, with little recognition, were now done in a factory by men. For example, the production of preserved and bottled foods acquired 'importance' with its move to a factory" (40). The high status accorded to man-made commodities is part of capitalist ideology and is designed to ensure consumption from the market, which is the only way a capitalist can make a profit. The household economy is seen therefore as competition and must be weakened, controlled, even destroyed. Breast milk can be viewed as one more subsistence product to be displaced by an industrially produced and marketed product, i.e. formula.

As development progresses at the expense of the subsistence household economy, women are forced into the role of consumers. According to Nash (38):

Their films, magazines and television programs provide the models for stimulating consumer interest on the periphery . . . Even the lower classes became consumers of products unavailable or produced at great social cost in their countries: cosmetics, dentifrices, patent medicine, crockery, cooking ware—items that replaced indigenous products made at little to no cost before the invasion of foreign goods. Since they were often the products of household based crafts, fitted in with domestic and child-rearing tasks, the loss of these low cost productive centers increased the dependency of local producers on the mass production market.



It is not surprising that women in countries which for several centuries have been dominated by the creators of capitalism are easily convinced to utilize infant formula. The alternative to formula is breast milk, a home-made subsistence product which, like other such goods, is devalued because it does not permit the extraction of a profit. That a poor urban or rural woman in a Third World country should be convinced that formula is better than "home-made" milk is not unlike the same woman deciding to buy canned vegetables, factory-made clothing or bottled soft drinks although she conceivably could have produced equivalent items using her own hands and skills.

In terms of its value for the integration of the newborn into capitalist market relations, bottle feeding may be seen as the earliest instance of consumerism. Formula feeding encourages the quest for rapid physiological need satiation since the milk flows from the bottle much more rapidly than from the mother's breast. The baby is rapidly satiated at the expense of the psychological satisfaction, the human bonding, which occurs during breast feeding. Formula feeding is thus the introduction to the newborn of the consumer society in which the quest for rapid material satiety overshadows our natural interdependence. As baby bottle comes between the warm, loving intimacy of a mother and her infant, so do market relations come between human beings. Like the bottle baby, we become trapped by commodity relations and the fetishism that obscures their essence: to produce and consume commodities in such a way as to ensure a profit for the owner of capital. Even when such consumption is shown to threaten the health—even the life—of the consumer, capitalism requires consumption.

Women and the Professionals

Beginning in the 14th century, a series of powerful politico-economic movements began to gradually, often with violence, remove women from their traditional roles as healers and midwives. The male-dominated medical "profession" was thus born at the expense of women who increasingly became its clients rather than its practitioners (41).

By the second half of the 19th century, the wives of wealthy industrialists were no more than baby-making adornments and a refuge for their husbands from the ugly, often violent world of the factory. These women became showcases of wealth, leisure and sensuality, falling victim to extreme boredom which resulted in an epidemic cult of "invalidism" (42). Upper class women became the target of (male) physicians who saw great economic potential in cultivating a practice serving wealthy invalids. Eventually a whole theory of the nature of the female mind and body was developed to explain women's sickly, frail nature and to justify lengthy medical treatments. Interestingly, working class and nonwhite women were considered strong (42).

Women were portrayed as a battleground between brain and uterus; using the former would weaken the latter. To conserve energy for reproduction, every minor physical or mental indisposition was an indication for bed rest, often of long duration. Eventually all normal aspects of female physiology were seen as pathological: puberty, menstruation, pregnancy, childbirth, menopause (42).

As regards breast feeding, it is important to recall that the development of condensed milk suitable for infant feeding came between 1860-70, in the midst of the "invalidism" cult and when misogynous theories abounded. It is no wonder that Henri Nestle decided to aim his infant milk publicity at the medical profession (later he

would aim it directly at mothers) (15). These doctors—as caretakers of the wealthy class and obsessed with devaluing and removing, with pseudo-scientific justification, every activity (except pregnancy and childbirth) from their female patients—were prime recipients of publicity for a commodity that would lessen the burden of their patients and allow more of a woman’s energy to “go to the uterus.” The bothersome duties of frequent lactation could in the absence of a wet nurse now be performed by anyone. Jelliffe and Jelliffe (43) describe this trend:

From the distribution of comparatively simple cow’s milk preparations to poorer working women increasingly complex bottle-feeding began to be used by the elite, although wet nurses continued to be employed. The cultural appeal of formula feeding to pediatricians and parents in this enthusiastically science dominated period is obvious. The optimistic certainty and exuberant assurance of such developments is indicated, for example, by the 1867 book by Liebig entitled: *A Food for Infants: A Complete Substitute for That Provided by Nature*.

By 1900 half of all U.S. births were still attended by midwives. The doctors in the new field of gynecology sought to eliminate midwives entirely (44), which they accomplished, at least in the United States, in a few decades. With women eliminated as practitioners, men began to commoditize the birth process, making gynecology today the most highly paid branch of medicine. The so-called science of modern gynecology and the practice of hospital births have further contributed to the decline of breast feeding as childbirth has become commoditized and controlled often for the physicians’ benefit. For example, the Caesarian section makes a birth more convenient and lucrative for the doctor, but more difficult for the mother and infant. The C-section impedes mother-infant bonding and breast feeding since it is serious surgery. Many C-sections are performed unnecessarily in the United States and are more an attribute of the hospital and the physician than of the women giving birth (45). In addition, the separation of mother and infant, standard procedure in many maternity wards, is accompanied by nursery formula feeding of the infant and by hospital endorsement of this infant feeding regime via free formula sample distribution.

Commoditization of Motherhood

Throughout the early 20th century, more and more women consulted “experts” rather than each other for advice on the problems of raising children. Of course, the experts’ advice was ever changing and always in accord with the needs of capital. For example, Rockefeller interests, the first to fund and promote “expertism” in general, spent 7 million dollars between 1923–29 to devise a method for expert-controlled child rearing to “bring the home into harmony with industrial conditions” (41).

In the 1940s, permissiveness was encouraged to bring children into the consumer society. To make super-profits, every commodity had to be sold so everyone became a consumer, including children and infants via their mothers. Infant formula, which satisfied the baby faster than breast feeding, fit in with this ideology.

One of the expert psychologies most detrimental for lactation peaked in the post-World War II era. Women were to be obsessed with femininity and to make themselves

alluring and sexy for their husbands. The sexual activity was supposed to tranquilize women and thereby prevent them from damaging their children (41). Breast feeding did not fit in with this psychology; it might deform the breasts, making them unattractive to the husband. For several decades, this has been a preoccupation of women who see their breasts as a symbol of their sex appeal to men (43).

Imperialism and Public Health

In the early 1900s, when they were promoting expertism, Rockefeller interests and the Carnegie Foundation spurred the movement to make U.S. medicine a lengthy and elitist career founded on expensive technology and commoditized health delivery systems centered in large, multimillion dollar institutions (45, 46). Rockefeller interests also began to view "public health" programs as a way to increase worker productivity, first in the agrarian southern United States (hookworm eradication) and later throughout the colonial and neocolonial world (46).

In 1954, the United Fruit Company, with the help of the CIA and the U.S. State Department, engineered the bloody overthrow of populist President Arbenz of Guatemala (47). That same year, the president of the United Fruit Company explained why public health programs were undertaken in tropical countries (48): "... because they could not get out the ore, or raise the bananas or pump the oil unless these fundamentals were taken care of." A few years later, in 1961, the U.S. government and its scientists began a campaign of biological and conventional warfare against Cuba (49), showing that, indeed, "public health" programs were a two-sided coin. In 1971 the CIA introduced a swine flu epidemic into Cuba which wiped out half the country's hog population (50). While public health was considered a worthwhile investment as long as it allowed increased U.S. profits from and domination over a neocolonial country, the bacterial or viral poisoning of a country was considered just as viable a tool and laid bare the true aim of seemingly humanitarian public health programs.

The imperialist nature of the spread of "Western" medicine cannot be underestimated. Not only did this medicine help conquer foreign lands, it also opened up markets for urban hospital construction and drug and equipment sales. With these multimillion dollar hospitals, medical school scholarships to study in Western countries and expensive technology transfers, Western medical routines as well as equipment and supply deliveries could be virtually guaranteed. As Drummond (51) points out, "Physicians are merely the plant supervisors of the medical business. The true captains of health care are the same ones who control all the other industries." Elaborate, unnatural maternity routines are among those technologies transferred, encouraging at the same time the decline of midwifery. The process includes formula feeding, free formula sample distribution, separation of mother and infant after childbirth, and so on (52).

In Mexico, Nestle's formula promotion through the mass media is almost nonexistent since the company has convinced Mexico's largest public health delivery institutions, IMSS and ISSSTE, to provide Nestle's formula free of charge for extended periods to mothers of infants who qualify for the medical insurance (36).

Breast Feeding and Fertility

U.S. interest in birth control in Third World countries has increased over the past 20 years. Whereas augmenting worker productivity was the main concern in the early part of the century, the second half has seen increased efforts at population control. The birth rate is blamed for the poverty of the Third World, which is seen to possess revolutionary potential and therefore to pose a threat to the capitalist system. In response to U.S. pressure, "client regimes have . . . curtailed their already modest mass medical programs, substituting birth control instead" (53).

Recent interest in the promotion of breast feeding by philanthropic and development agencies must be seen in this light. Modern science has shown that a baby's frequent suckling delays the onset of menstruation in the parturient lactating mother and thus is an effective means of lengthening birth spacing by prolonging postpartum amenorrhea. Lactation may be seen therefore as a means of birth control at the population level (54). U.S. government agencies have increasingly funded studies aimed at elucidating the relationships between breast feeding and female fertility (43). These same agencies may promote and endorse breast feeding as a culturally acceptable means of population control.

The control of women's fertility, be it for increased population growth to augment the supply of labor and the reserve army of the unemployed, or for reduced fertility when overpopulation is perceived to be a threat to the system, has been seen as the prerogative of the ruling class. Although breast feeding is definitely the best way to feed an infant, its promotion by U.S. agencies should be seen in light of the relationship between breast feeding and fertility since the short-term interests of the ruling class are in the profits accruing from the sale of formula. Liberal members of the establishment, such as those working in the Rockefeller and other foundations, may see a long-term benefit in promoting breast feeding. As a means of birth control, it is culturally acceptable, has no memory-dependent regime as do pills, and its promotion gives the appearance of progressive, nonprofit oriented humanitarianism with even a touch of feminism thrown in for good measure. Given the austerity measures promoted by U.S.-dominated banking institutions, breast feeding may be seen as a way to fill in the enormous gap created by the curtailment of many public health programs aimed at women and children.

Although the promotion of breast feeding is a positive event, the motives of its promoters must be understood because they are subject to change according to the needs of capital. Even the termination of Nestle's stubborn refusal to abide by the WHO formula marketing code should be placed in this overall context given the world recession and the terror in top world banking circles concerning the reactions of Third World peoples to inhumane austerity measures designed to facilitate debt repayment.

For the time being, the numerous advantages of breast feeding, which for the establishment means principally its immunological and antifertility properties, so useful to the power structure given today's world economic crisis, will bring breast feeding back into the socioeconomic mainstream. However, as economic realities change, the profit motive will induce capital to look for marketable, i.e. surplus value producing, commodities which can once again replace the subsistence good: breast milk. The scientifically proven benefits of breast milk and the comparative inferiority

of formula are so well known and documented that the latter will probably never enjoy its past popularity. But, the socio-ideological package used to promote formula can and will be resurrected when technology permits banked human milk to retain its immunological activity upon storage. Additionally, science will probably provide information allowing the antifertility response from human milk production to be preserved in the absence of infant suckling and with mass use of breast pumps. This is particularly insidious since there is evidence that the antifertility effect of lactation is positively correlated with maternal malnutrition (55). Thus, the duration of post-partum amenorrhea increases with the severity of a lactating woman's poor nutritional status. Additionally, the number of suckling sessions per day has been shown to have an effect (56). Since it is doubtful that the ruling class will abandon its interest in Third World fertility control, promoting breast milk production (with or without breastfeeding) will continue to be a policy, albeit with the tacit understanding that the greatest decline in fertility comes from malnourished as opposed to well-nourished lactating women. And, as historically occurred with formula, banked human milk will first be sold to the elite with forces later being unleashed upon the poor to follow suit. Doctors and hospitals can be expected to play roles similar to those they exercised for formula distribution. Moreover, as with banked blood, much of the supply of human milk will come from poor donors who will receive a small sum of money for their subsistence commodity which will then be sold on the market at a considerable profit.

The Insufficient Milk Syndrome²

As discussed in preceding sections, a series of powerful historical factors have, for several centuries, devalued women and robbed them of their public, respected, useful, necessary social and economic functions in production and reproduction. Therefore, even women who desire to breast feed may succumb physiologically to the dominant ideology which undermines their self-confidence, worth, and social value, making them, due to sensitive hormonal responses, truly incapable of producing sufficient milk. Others, who have sufficient milk but for the same ideological reasons do not want to breast feed, will claim that they are physiologically incapable of performing the task for which nature has prepared them. Predictably, the syndrome is strongest in Third World countries where market relations (i.e. the capitalist mode of production) are strongest. Rural women are less affected by this syndrome. However, as capitalism penetrates these areas by increasing the market focus of life, the insufficient milk syndrome should become more prevalent in rural areas as well. This, however, depends on capital's overall appraisal of its needs and the struggle between forces within the ruling circles for long-term or short-term gain.

DISCUSSION

As stated in the introduction, Marxist and mainstream analyses present very different views of a given problem. In this comparative analysis, nevertheless, it has been

² "Insufficient milk is the answer many women give when asked why they have weaned their infants. The phenomenon appears on a world scale and hence has been labelled a syndrome (57).

shown that the promotion of bottle feeding for use by the Third World's poor cannot be supported.

The mainstream is divided into two camps. On one side are the "Chicago School," the Reagan Administration, and other forces who promote government noninterference in business. Typically, they claim that, left alone, the market will solve its own problems. Their economic policies are of the short-term gain variety. Nestle, a member of this camp, has tried to refute the criticism that it is behaving unethically, insisting that it is providing a service, often charitably. This, however, is not supported by the evidence. In spite of multimillion dollar efforts by Nestle to improve its image, the corporation has been forced to change its practices.

The other mainstream camp, represented by the "liberals," believes that regulation may be necessary for the long-term survival of the system. These forces tend to have a more global and futuristic view of the economy. The World Bank, which often employs liberal economists such as Reutlinger and Selowsky, can see the beneficial effects of promoting breast feeding for the control of fertility. However, empirically this must be examined by reference to the market (costs, prices, marginal propensities) because in the last analysis, ethical reasons alone are not sufficient. The liberal analysis has shown that bottle feeding is not cost effective at the family and national levels. In addition, it has been shown that when a poor infant's mother enters the labor force, the low marginal propensity to spend on the infant may result in infant malnutrition. Furthermore, the claim that Nestle is providing a service to working women is not borne out by available data.

In contrast, the Marxist analysis details the historical process of the development of the capitalist mode of production, showing it to be responsible for the shift to bottle feeding. On the one hand, the formula industry, exemplified by the giant food processing Nestle Corporation, has been an active participant in capital accumulation, imperialism, and neocolonialism. The profit motive has been the guiding force in all activities, and advertising, so crucial for the superfluous food processing industry, has been the arm of implementation of another phase of the capitalist mode of production: i.e. consumption, without which there can be no realization of surplus value. In 1866 milk food, suitable for infant feeding, was Nestle's first product. Nestle has reaped great benefit as its dairy product industry, including formula, paved the way for large-scale growth and expansion, particularly as the two world wars brought astronomical amounts of capital to Switzerland. The Third World has provided Nestle with cheap resources, including labor and raw materials, as well as a market for its high-priced products. Large-scale expansion into the Third World has permitted the amassing of super-profits.

Furthermore, the historical, dialectical and materialist analysis of women shows that their functions have been increasingly usurped by male-dominated modes of production. Women, who historically had provided necessary, appreciated goods and services for the family and community, were gradually displaced along with the household (subsistence) economy. They became producers of use value but not exchange value and a hindrance to the development of capitalism wherein market relations must dominate. The mental and physical degradation of women, their elevation in advanced capitalist society as consumers and sex objects, and their marginalization from social production and reproduction are responsible for the widespread, ready acceptance of

infant formula. Women have internalized, even hormonalized, the roles that capitalism has assigned them. Women bottle feed because that is the mode of feeding most advantageous to the capitalist system or, in ideological terms, the "modern" thing to do. The "warping" of human reproduction, including infant feeding, is another means of hiding our biological origins, kinship, and human interdependence, as well as women's position in capitalist society: producers of the commodity "labor" and consumers.

Public health programs and technology transfers emanating from the United States, regardless of their apparent motive, have always been covertly aimed at making the Third World suitable for the needs of capital. Even progressive sounding breast feeding promotions are the result of capital's need to curtail the revolutionary potential of high fertility rates and infant mortality, both of which are affected by breast feeding.

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